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| Generate Collection | Print |

DOCUMENT-IDENTIFIER: US 6330542 B1
TITLE: Automated internet quoting and procurement system and process for commercial printing

US Patent No. (1):
6330542

Detailed Description Text (144):
View/update current job status. The print provider may search for a job by ID, keyword or other specified variable, or view all jobs in the queue and/or sort all jobs by date, print buyer name, or other specified variable

Detailed Description Text (145):
View job history/archived job history. The print provider may search for a job by ID keyword or other specified variable. They select either "current" or "archived" depending on whether the status of the job is open or closed

Detailed Description Text (146):
View/update production availability profile and pricing structure

Detailed Description Text (147):
View/update contact information

Detailed Description Text (150):
Each job is given an ID number automatically by the system once a print buyer requests a quote. The ID number, from that point on, is used to track job status. For any job, there will always be a status including on hold, in production, and completed. The print provider is required to update the status of a job each time that status changes. Any change in job status entered into the system will, upon approval, be viewable by the Print Buyer. For example, a Print Provider may require additional information about a job in order to begin. The Print Buyer is notified of this (on their personal home page and via inter-system electronic mail) as soon as the Print Provider provides the information and it is approved and submitted to the database.

Detailed Description Text (157):
Link to "View job history"

Detailed Description Text (164):
The Link "View job history" points to the interface defined in the "Job history" section that follows.

Detailed Description Text (166):
For every job, there is a series of steps, which occur from when then quote is generated, to when the job is closed. Each of these steps is tracked within the system and viewable from the Job history interface for that particular job. This is a read-only interface (with the exception of certain administrators with the proper access privilege), which enables the Print Provider to look up important information such as dates the file was sent/received, delivery dates, press check status, etc. The interface lists, line by line, each status change and the date that that change was stored in the database.

Detailed Description Text (170):
A Print Provider's Production availability profile is updated by navigating from the
Print Provider home page to the View/edit production availability profile interface.
There are two types of availability profiles. One profile is for standard job
categories such as postcards or marketing collateral and the other is for presses
for custom product quotes. The standard job categories profile consists of four
primary options, which are viewable from the·profile interface:

Detailed Description Text (175):
The presses for custom product quotes profile (FIG. 17) consists of the following
primary options, which are viewable from the profile interface:

Detailed Description Text (194):
Click either the "Update profile" or the "Preview new profile"

Detailed Description Text (195):
After changing any of the options mentioned above, but before updating the profile,
the Print Provider will have the opportunity to preview the new profile.

Detailed Description Text (204):
To update contact information, a Print Provider navigates from their home page to
the "View/update contact information" interface. They manually enter text changes
into the fields where the information has changed. The fields will automatically
populate with the current information thus eliminating the need to re-enter any
current and accurate data. After changing any of these fields, but before updating
the information to the system, the Print Provider will have the opportunity to
preview the new changes

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L6: Entry 1 of 2                          File: USPT                          Dec 11, 2001

DOCUMENT-IDENTIFIER: US 6330542 B1
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printing

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Drawing Description Text (13):
FIG. 16 is a Print Provider Home Page: Update Job Status Interface screen for all
ordered products using the system and process of FIGS. 1-1A.

Detailed Description Text (138):
Job status--the function through which print buyers may check on the status of
pending orders. Once print buyers have established an account and have placed orders
using the system, they will be able to login at any time to check the status of
their job. Job status includes basic information such as: "in production" or "on
time", as well as critical information such as "missing font" or "approval
required." This function is only available to print buyers in login mode.

Detailed Description Text (142):
The print provider Component consists of a series of interfaces which allow the
provider access to the system in order to enter information on job status and job
history, production availability profile and pricing structure, and current contact
information. Once published to the database, the data is instantly available to any
print buyer accessing the application, from their personalized home page.

Detailed Description Text (150):
Each job is given an ID number automatically by the system once a print buyer
requests a quote. The ID number, from that point on, is used to track job status.
For any job, there will always be a status including on hold, in production, and
completed. The print provider is required to update the status of a job each time
that status changes. Any change in job status entered into the system will, upon
approval, be viewable by the Print Buyer. For example, a Print Provider may require
additional information about a job in order to begin. The Print Buyer is notified of
this (on their personal home page and via inter-system electronic mail) as soon as
the Print Provider provides the information and it is approved and submitted to the
database.

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L2: Entry 1 of 2                    File: USPT                    Dec 11, 2001

DOCUMENT-IDENTIFIER: US 6330542 B1
TITLE: Automated internet quoting and procurement system and process for commercial printing

US Patent No. (1):
6330542

Detailed Description Text (36):
Envelopes: The envelope category includes graphics of many types of envelopes including #10 regular, #10 regular window, #10 double window, #9 regular, and representations of booklet and catalog envelopes. The graphics default to display the front of the envelope but an option allows the buyer to see the back as well to ensure the buyer has chosen the desired style. The standard variable options are available. In addition, for the booklet and catalog envelope, the print buyer also selects the desired size from a pull down menu. For all of the envelope graphics, the buyer also has the option of selecting an option for the envelope to be printed as a flat sheet and then converted to an envelope for projects with more precise registration.
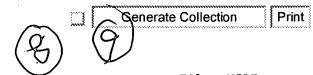
Detailed Description Text (79):
1) The system recommends a paper selection based on a pre-chosen profile.

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## End of Result Set

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L4: Entry 1 of 1                          File: USPT                          Dec 11, 2001


DOCUMENT-IDENTIFIER: US 6330542 B1
TITLE: Automated internet quoting and procurement system and process for commercial
printing


US Patent No. (1):
6330542


Brief Summary Text (21):
These and related objectives are achieved through the use of the automated Internet
quoting and procurement system herein disclosed. The automated Internet quoting and
procurement system described herein features a series of graphical interfaces which
represent various printed products that are linked to a database of prices and other
variable options from various print providers. The products are arranged in a
catalog by common product type. The printing buyer is guided to the section
containing the products for which the buyer needs a quote. The buyer selects the
product for which it desires a quote and then is prompted for the additional
variable specifications required to compute the quote. This preferably includes
variables such as quantity, paper, ink, turnaround time, shipping zip code, and a
question which prompts the buyer to determine if a press check is required and if so
what is the maximum distance the buyer is willing to travel. Upon selecting the
desired variables, the system uses the appropriate algorithm to generate the quote,
which also includes the freight costs to the destination zip code.

Brief Summary Text (22):
If the printing buyer does not see a graphic that represents the product for which
they are seeking a quote, the buyer is directed to the custom product graphic for
that product category. The custom product category allows the printing buyer many
more variable options than the standard product graphics and allows the printing
buyer to create virtually any variation of the product in that category and still
receive an immediate quote. To assist the printing buyer with answering the series
of questions required to compute a custom quote, the system features graphical
interfaces with each question which help the buyer with the responses to each
question. The system has a complex database of information for each of these custom
product categories which allow it to search for the criteria entered by the printing
buyer. The system computes the optimal equipment on which to print the project given
the quality, quantity, and size requested by the buyer, then searches the database
for costs for all of the required functions provided by print providers, and then
computes the quote using one of many various algorithms depending on the other
specifications that were entered by the printing buyer. This novel approach allows
the system to automatically generate quotes for custom products, but furthermore, it
ensures the project is produced on the most efficient equipment for that particular
product.

Detailed Description Text (16):
Furthermore, the print buyer may not really know if they are getting the best price
because the print providers that have been contacted for the project may not be the
most competitive on those items for those quantity ranges.

Detailed Description Text (26):
Quantity. Quantity options offered depend on the type of product but range anywhere
from several hundred to over 500,000.

Detailed Description Text (40):
Black and White Digital Printing and Photocopying: In the black and white digital
printing and photocopying category, the buyer selects first selects one of two
graphics including an 8.5.times.11 booklet and a 5.5.times.8.5 booklet. Then the
buyer selects the number of pages which includes a selection to choose single or
double sided copies, type of production-photocopying or digital printing, binding
options, paper selections, turnaround time, quantity, and cover options. The type of
production selection includes an explanation of the differences between the two
methods. The binding options includes a selection of various binding options
including saddle stitched, stapled upper left, spiral, and tape binding options that
are offered depending on the thickness of the document. Paper selections include
several standard options. The cover option includes an option to select a different
color cover stock or clear acetate for both the front and back cover.

Detailed Description Text (44):
Each print provider completes a price-matrix-on-their home page 60 (FIG. 1A) for
each item they want to supply for quantity ranges they are most competitive on. This
price matrix will include the quantity and all variable information being offered on
that item in addition to different production times.

Detailed Description Text (48):
Then the system searches for the lowest price for that quantity range and variable
options among the vendors that have been identified.

Detailed Description Text (49):
Next it computes the weight of the order based on the quantity and paper weight and
computes the freight at 68 by choosing the most competitive shipping method for each
of the printing companies that meet the criteria in the search. Then the system
displays the vendor with the most competitive printing and freight cost and assigns
a reference number to the quote at 70.

Detailed Description Text (53):
In this algorithm, the system searches for the best turnaround time at 90 given the
options selected at 91 by the print buyer for paper 93, ink 95, quantity 96,
delivery zip code 97, press check 98 and vendor preference 99. The system generates
a quote at 92 based on the prices of available print providers at 94 offering the
best turnaround 90.

Detailed Description Text (55):
It is possible to search for the best value without specifying a turnaround time. In
this algorithm, the system searches for the best price at 100 using the options
selected at 101 for paper 102, ink 103, quantity 104, delivery zip code 105, press
check 106 and vendor preference 107, but independent of turnaround time 108, to
locate the print provider that offers the best price available.

Detailed Description Text (57):
In this algorithm, the system uses the options selected at 110 for paper 111, ink
112, quantity 113, turnaround 114, delivery zip code 115, and vendor preference 116
to find the print provider at 117 that offers the best price given the criteria
presented.

Detailed Description Text (59):
In this algorithm, the print buyer is prompted at 120 with an additional drop-down
menu of distances they are willing to travel in order to perform the press check.
The system then uses the print buyer's selected (at 121) travel distance, as well as
the other options selected for paper 122, ink 123, quantity 124, turnaround 125,
delivery zip code 126, and vendor preference 127 as variables to find the print
provider at 128 that offers the best price given the criteria presented. Note that
the print provider list is more limited in this algorithm.

Detailed Description Text (64):
The system effectively aggregates volume. By aggregating the demand for these
products and allowing the print provider's plants to run at higher efficiencies, the
cost of the products will be lower. For example, if a printing provider has a 26"

five color press, the provider may be most profitable producing full color 6.times.9 postcards with an aqueous coating from quantities of 50,000-100,000 for example. Any orders smaller or larger than these quantities do not optimize this particular press. Smaller or larger orders will have to have a lower billable hourly rate in order to be competitive resulting in reduced profit margins for these types of project. In theory, the printing provider would only sell jobs that meet these exact parameters, but the reality is that is not possible for any printing provider. With this system and process, the printing provider receives the optimal mix of products, thus optimizing production capabilities, which results in lower costs without any sacrifice in margins.

Detailed Description Text (69):
Quantity 139: .sub.----

Detailed Description Text (114):
The system computes the run length at 157 by dividing the desired quantity 158 by the number of outs 155 for each sheet. Common sheet sizes are as follows where:

Detailed Description Text (119):
R1=Quantity/O1

Detailed Description Text (120):
R2=Quantity/O2

Detailed Description Text (121):
R3=Quantity/O3

Detailed Description Text (122):
R4=Quantity/O4

Detailed Description Text (128):
Bindery Costs=BN set up costs plus (BN costs per thousand times quantity)

Detailed Description Text (169):
Each Print Provider is required to maintain the listing of jobs being accepted. This information will include the type of jobs currently being accepted (i.e. postcards, marketing collateral, envelopes) as well as quantity, turnaround time and pricing for those jobs and available presses as well as run lengths, turnaround time, and hourly rates for those presses for the custom quotes feature. A Print Provider may add, delete or edit any job or press or any quantity, turnaround time or price associated with that job or press, in their profile at any time. The information entered is sent to the workflow for review by a content administrator, and once approved, is submitted to the system database. When a Print Provider makes changes to their production availability profile, the job or press in question (for that Print Provider only) is temporarily on hold until the administrator verifies the changes. During this time, quotes and orders with similar job specifications will be directed to other Print Providers in the network. Changes to the profile do not affect jobs currently in production.

Detailed Description Text (172):
Quantity range

Detailed Description Text (188):
In the "Add new job category with options" interface, the Print Provider browses a master listing of job categories from a drop-down menu and selects the job to be added or enters it manually and chooses quantity ranges, turnaround times and prices. Because a Print Provider may offer a single Job category with multiple quantity ranges or turnaround times, there may be many line items with the same Job category.

Detailed Description Text (190):
The Print Provider can edit options such as quantity range and turnaround time for job categories or impressions per hour and hourly press rates for presses from the main profile interface using the following process: